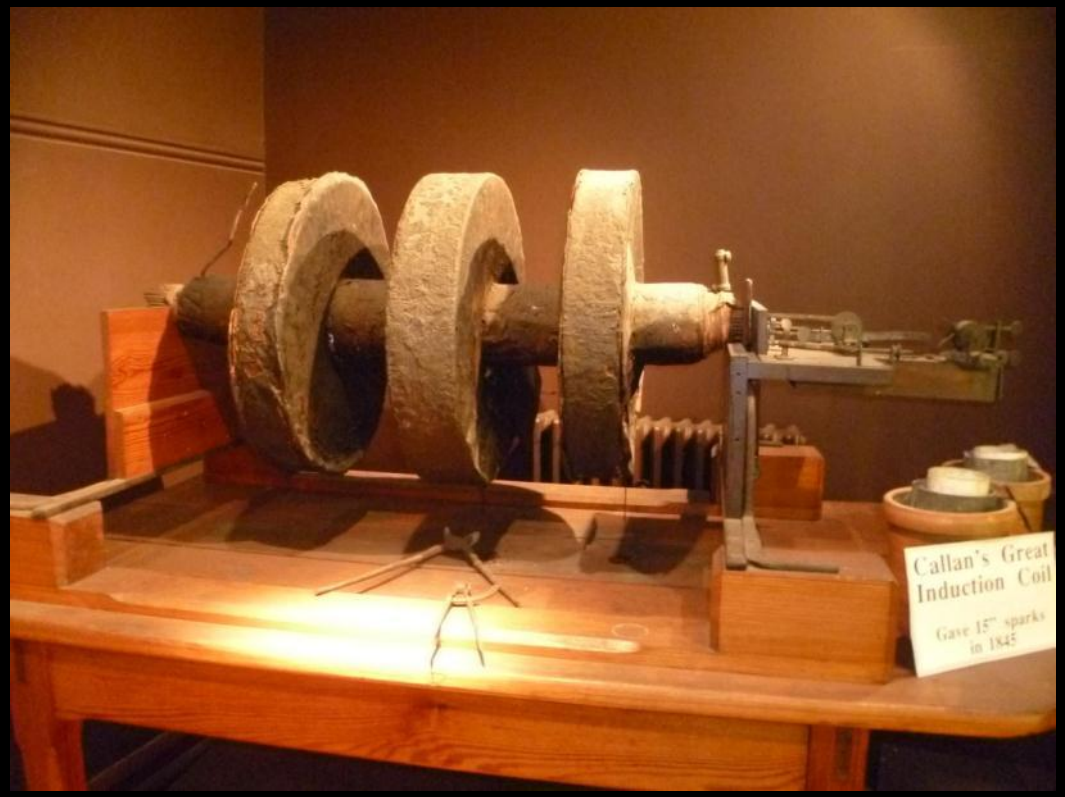
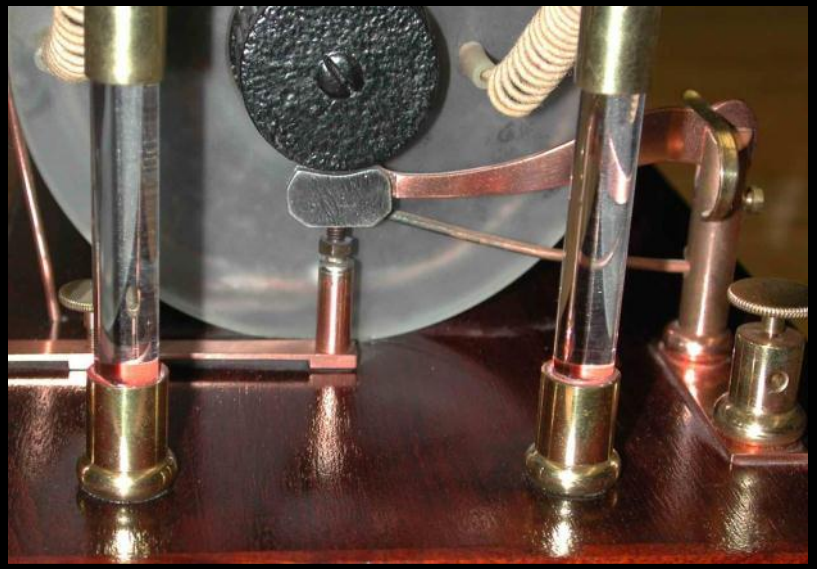
The History and Modern Development Of

Pancake Coils by Jeff Behary

1836-1857: Nicholas Callan's Great Induction Coils - Maynooth

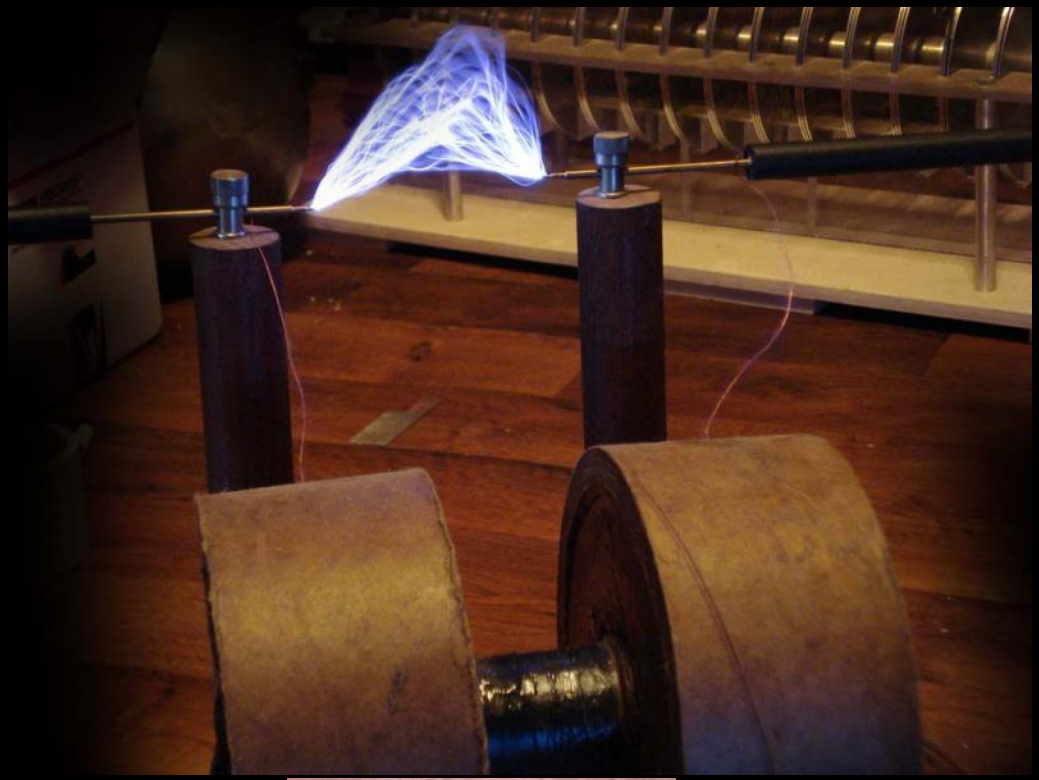


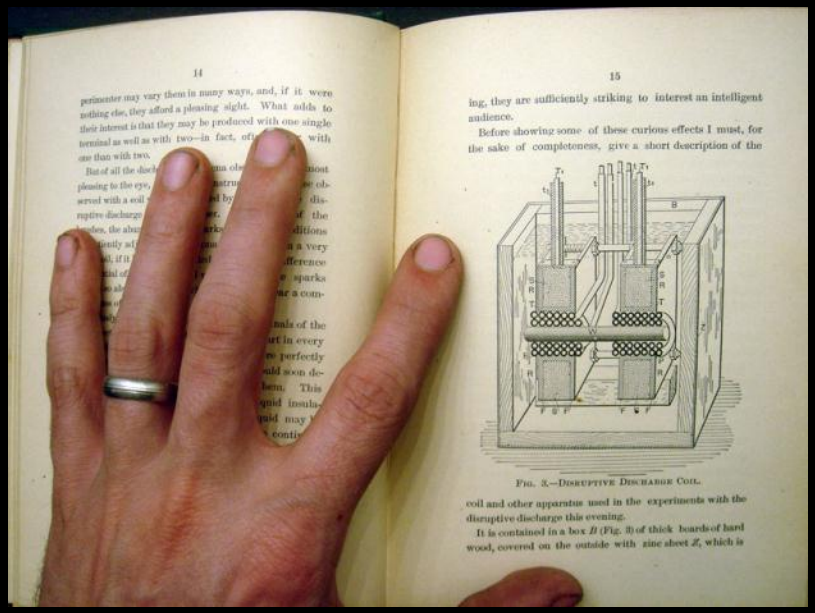
1851: Rhumkorff Induction Coil



1857: Edward Samuel Ritchie Coil

1893: Nikola Tesla's Lecture Coils





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perimeter may vary them in many ways, and, if it were nothing else, they afford a pleasing sight. What adds to their interest is that they may be produced with one single terminal as well as with two—in fact, oft with one than with two.

But of all the disch most pleasing to the eye, be observed with a coil d by dis-ruptive discharge of the bodies, the abu ditions a very ff, if it fference sparks ar a com-

nals of the rt in every e perfectly uld soon de-been. This quid insula-quid may

15

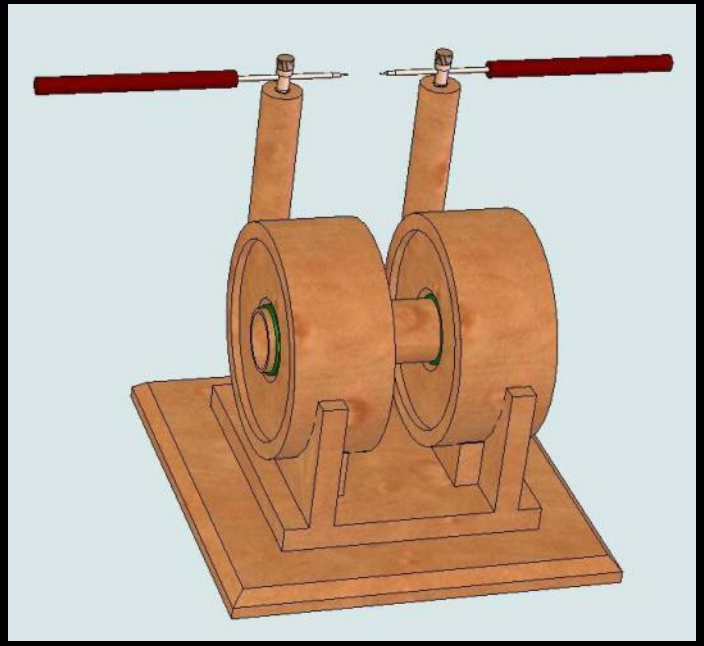
ing, they are sufficiently striking to interest an intelligent audience.

Before showing some of these curious effects I must, for the sake of completeness, give a short description of the

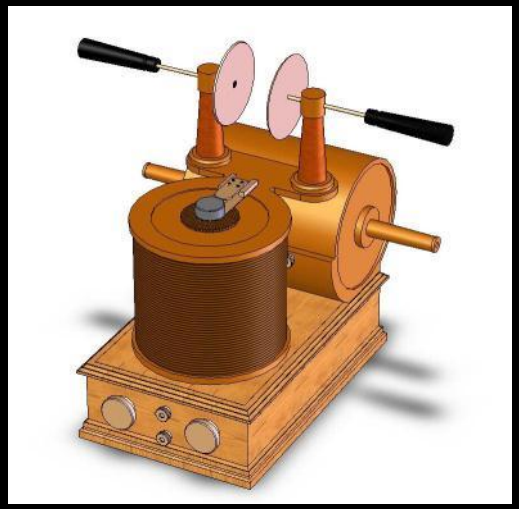
Fig. 3.—Disruptive Discharge Coil.

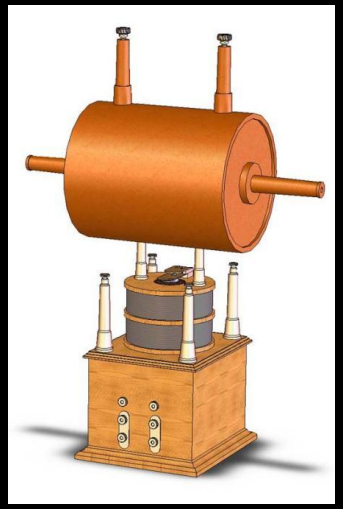
coil and other apparatus used in the experiments with the disruptive discharge this evening.

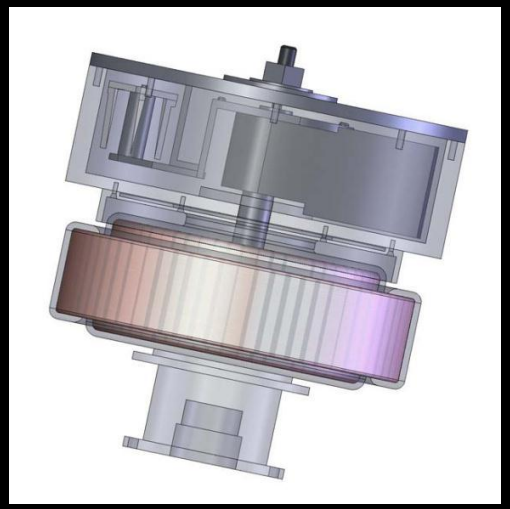
It is contained in a box *B* (Fig. 3) of thick boards of hard wood, covered on the outside with zinc sheet *Z*, which is

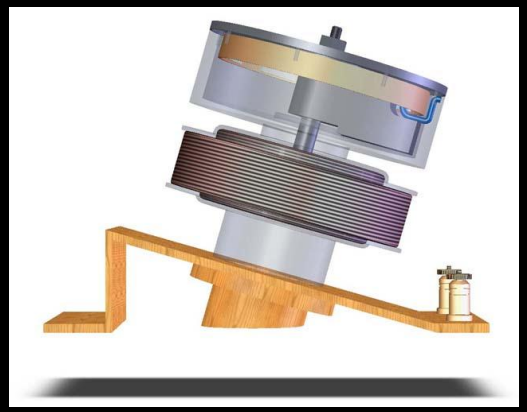


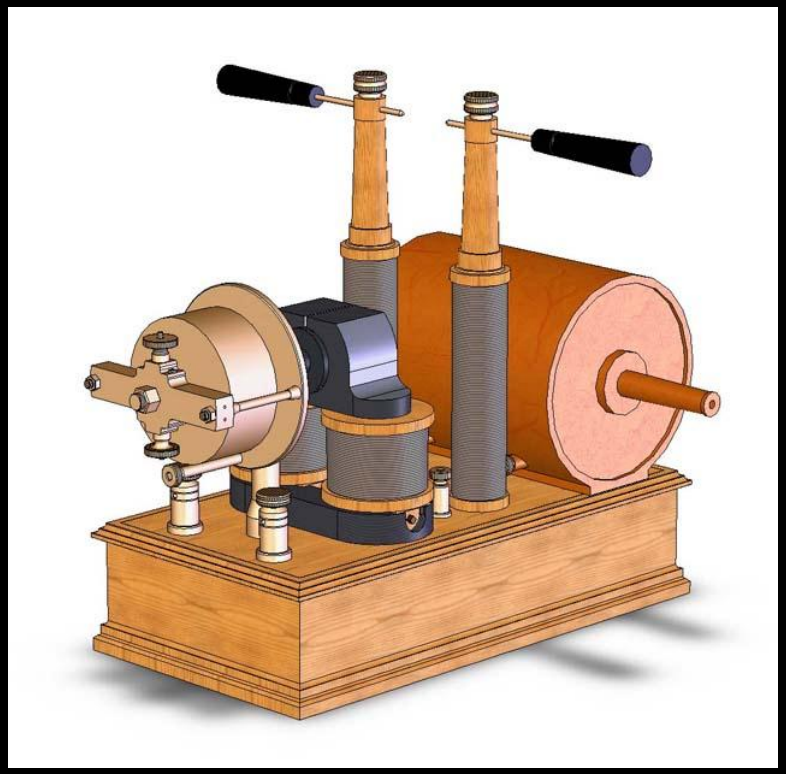
1895-1898: Tesla Oscillators / “Circuit Controller” Patents

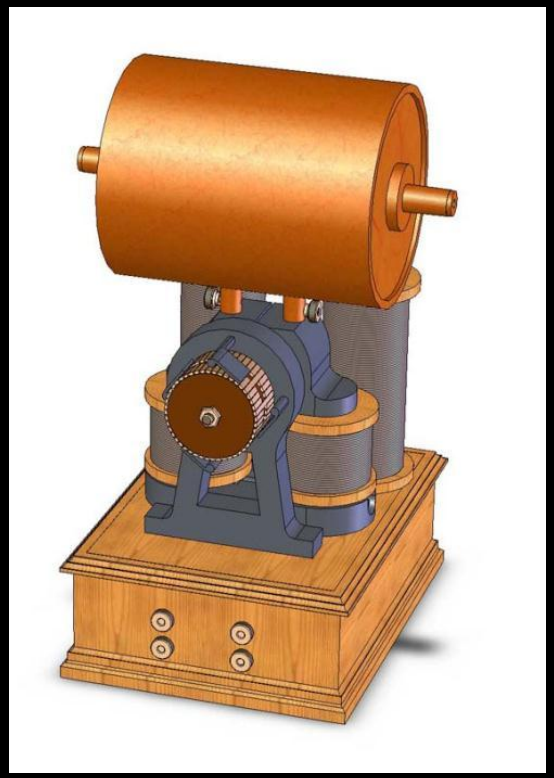


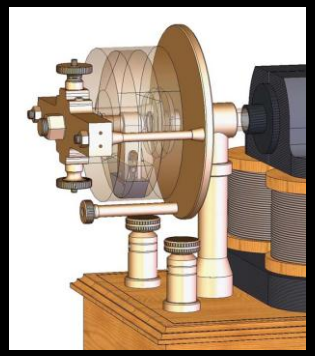




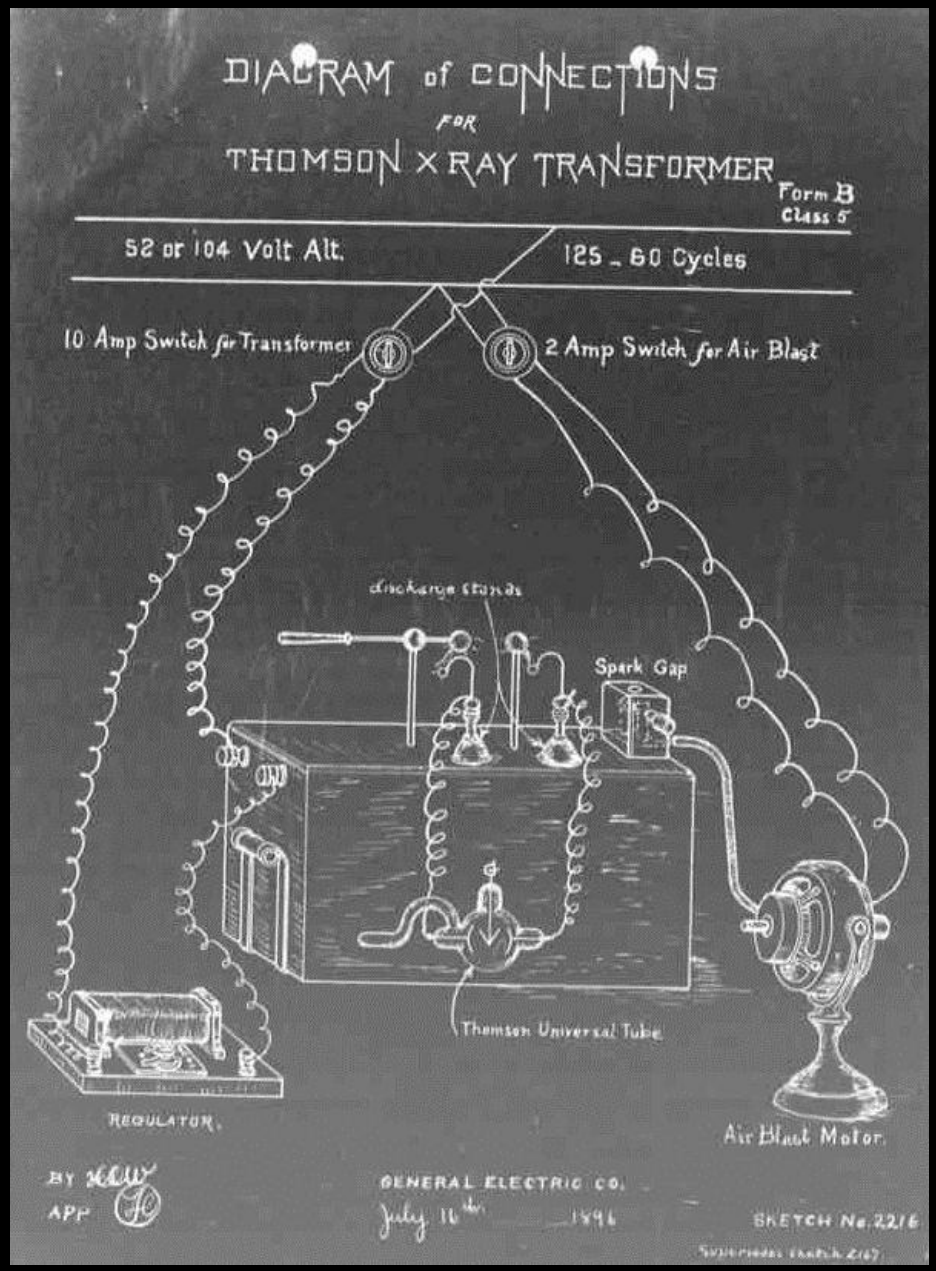


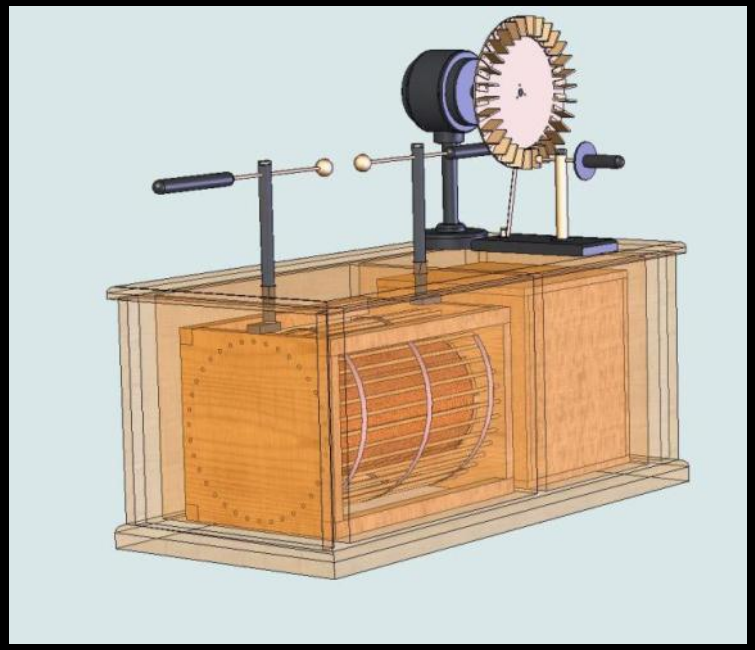


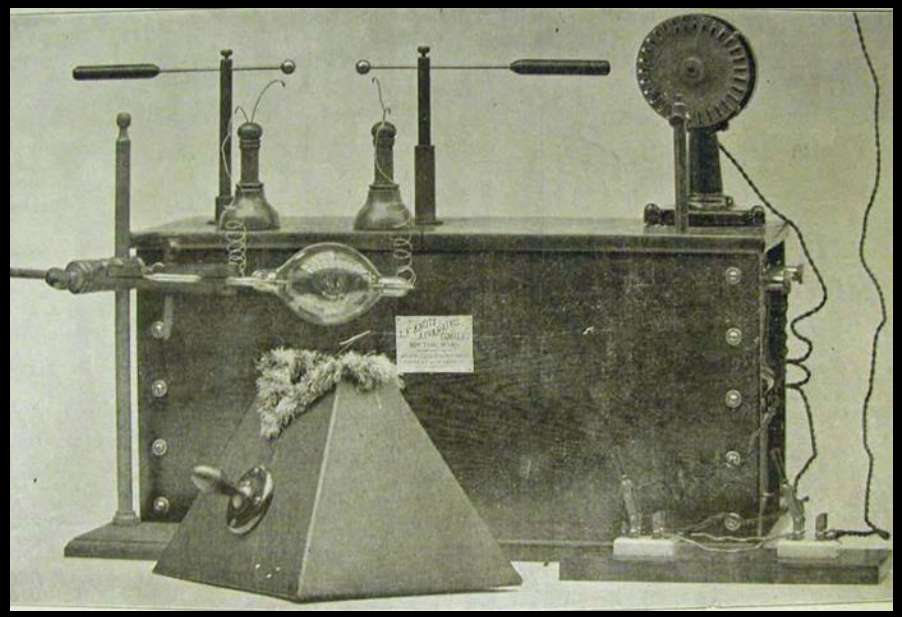




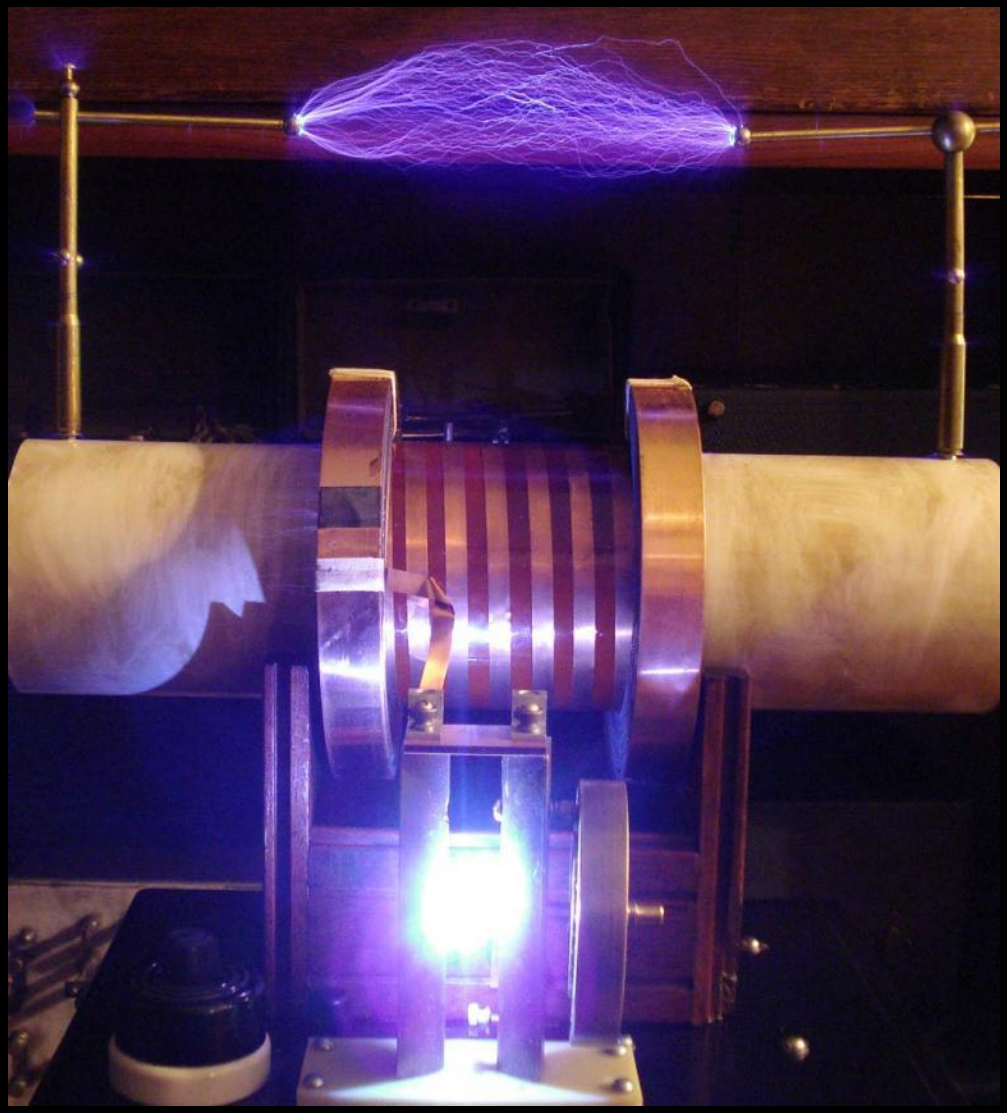
1896: Elihu Thomson's High Frequency Coil; LE Knott Apparatus





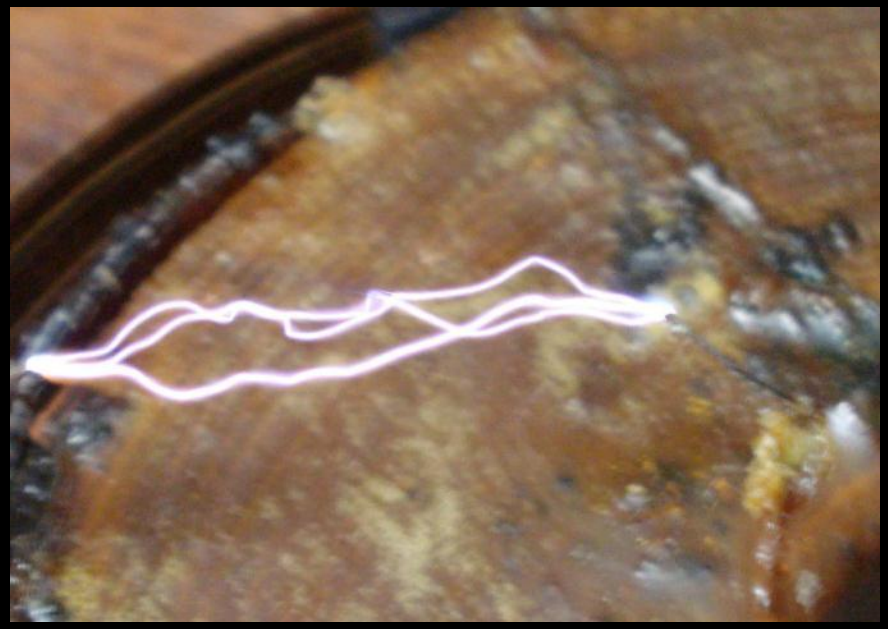


1897: Thomas Burton Kinraide's HF Induction Apparatus



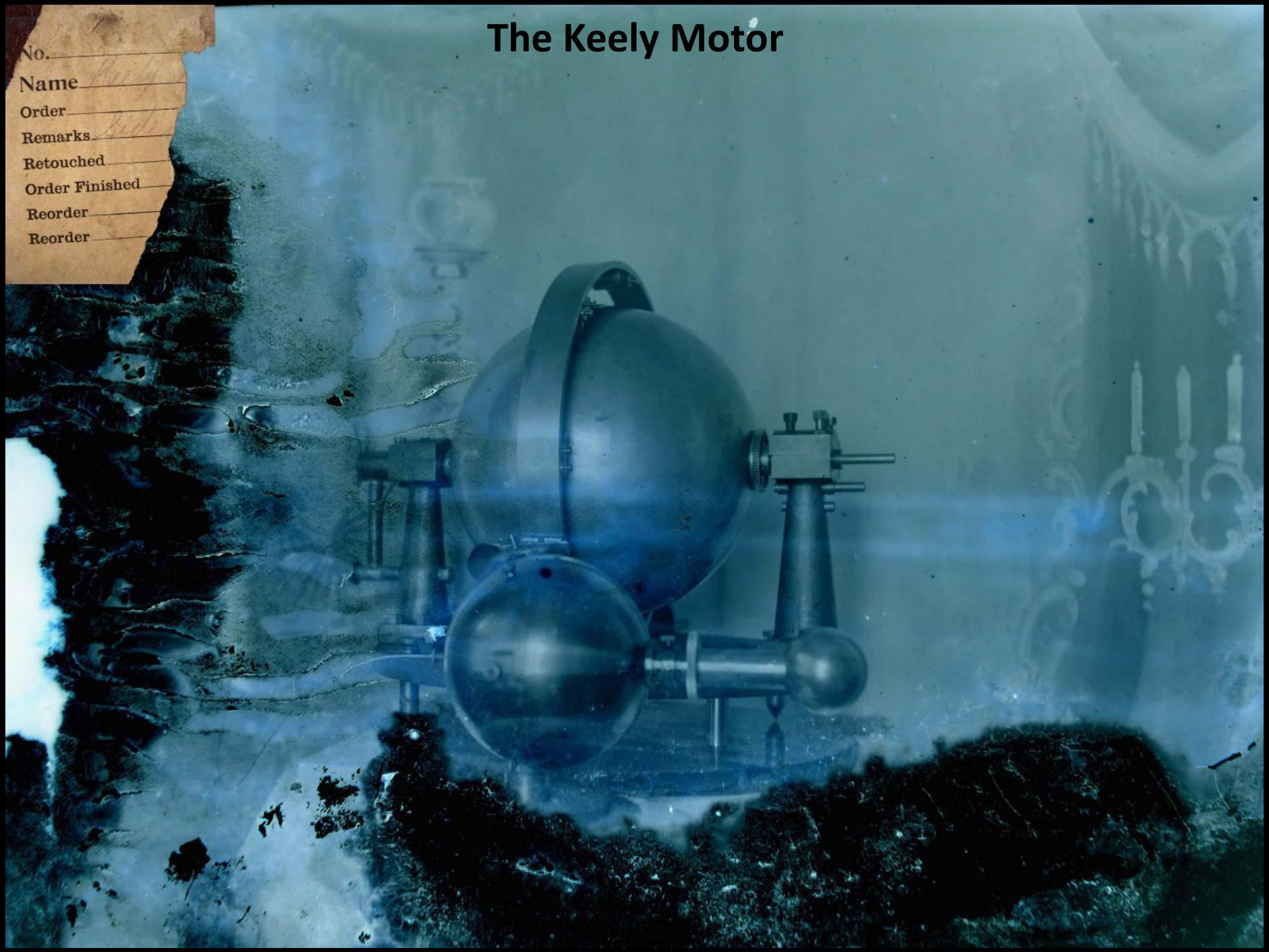
1898: Oldest Surviving Tesla Coils from Spring Park Laboratory!

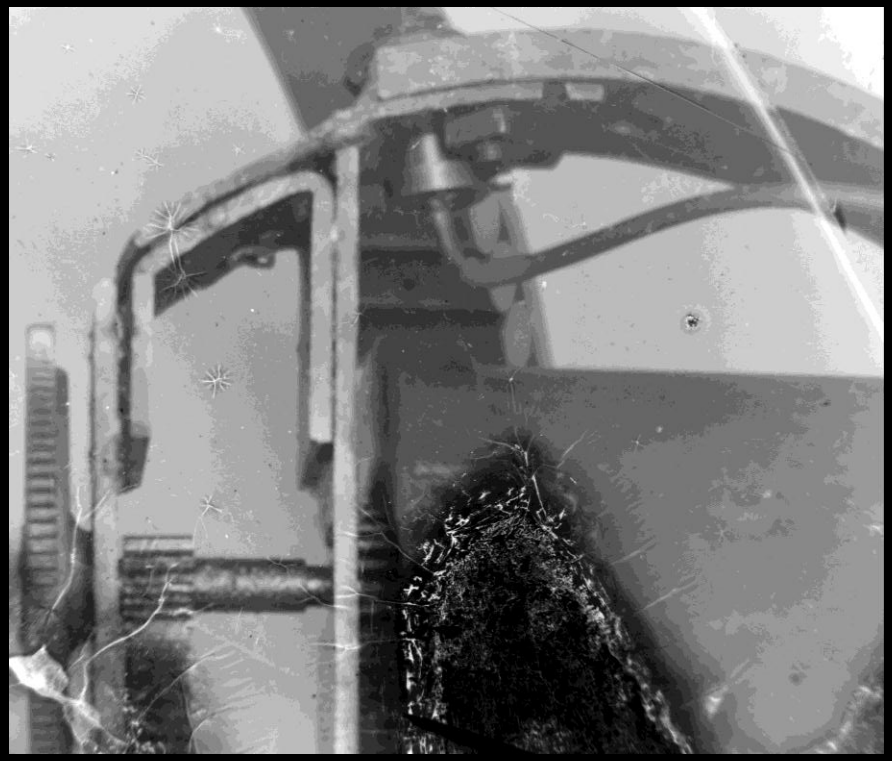
Still sparking a century later!

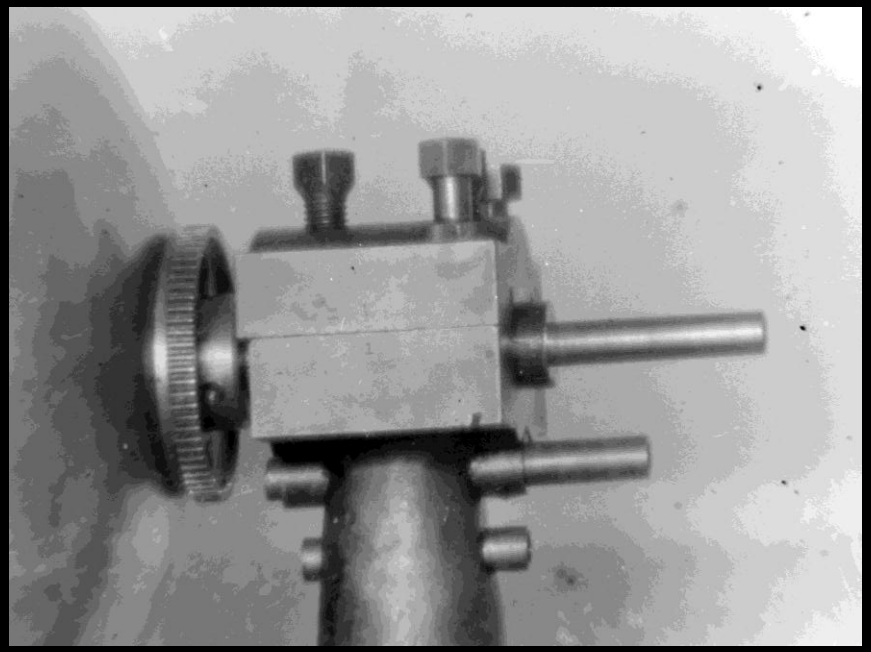


1898: The "Kinraide Coil" – Swett & Lewis

The Keely Motor



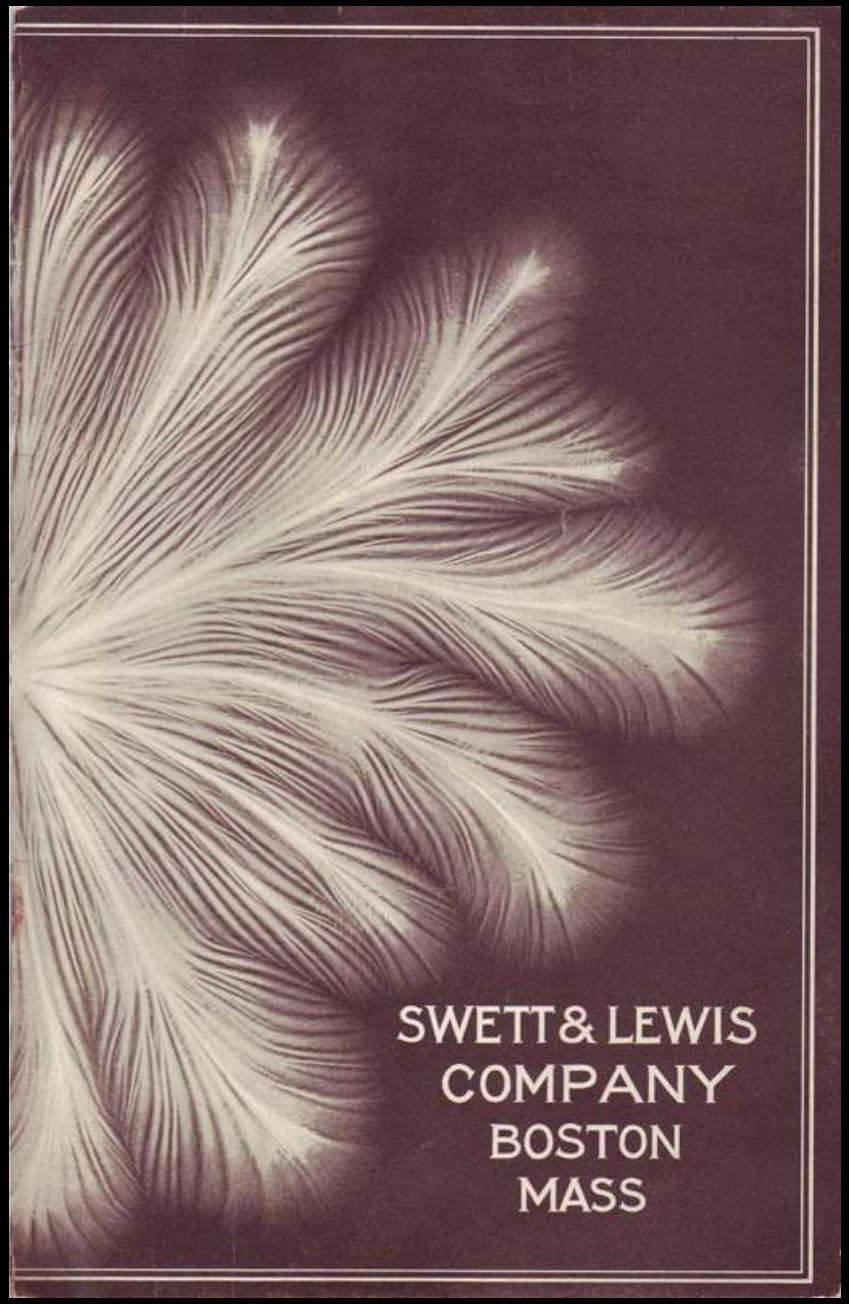




1901: Campbell Brothers

1904: Ralph C. Browne

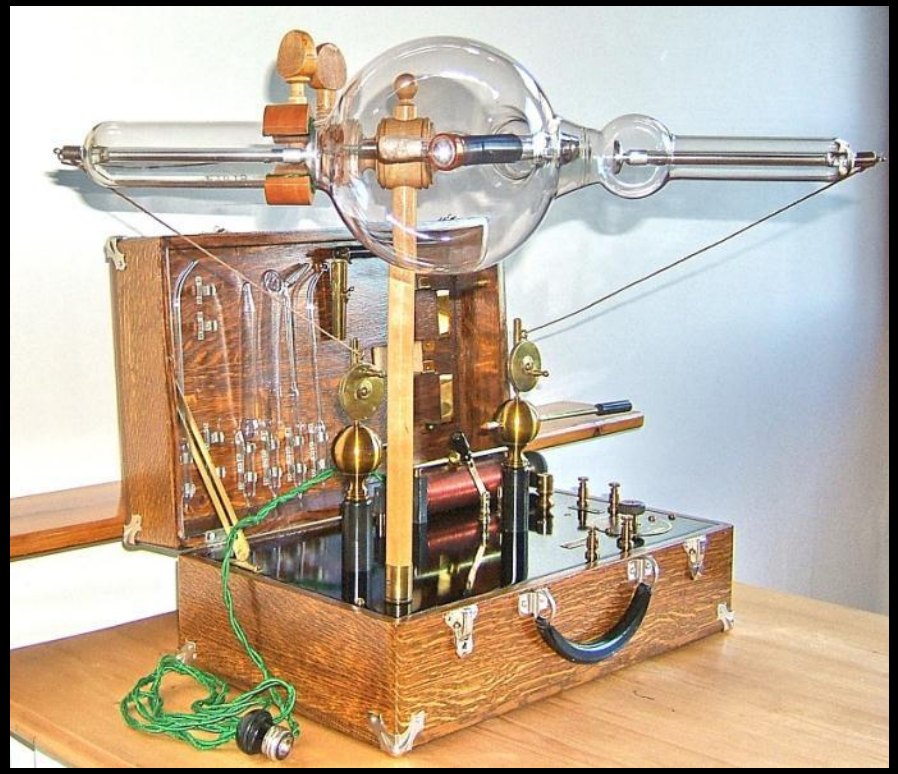
1904: The “Jackson Coil”

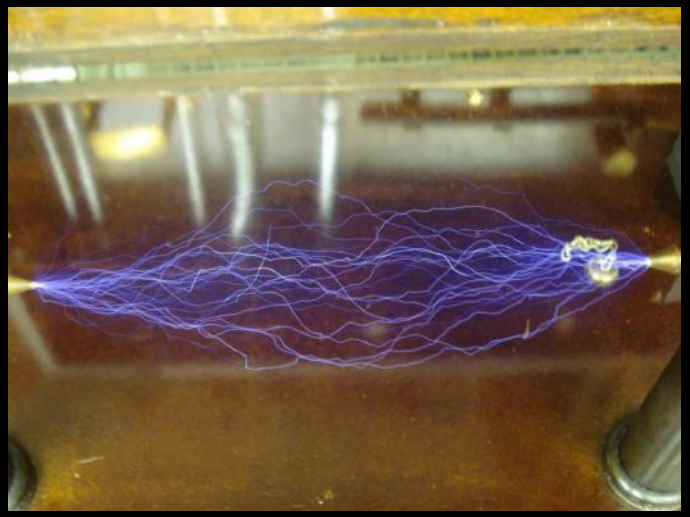


THE JACKSON COIL

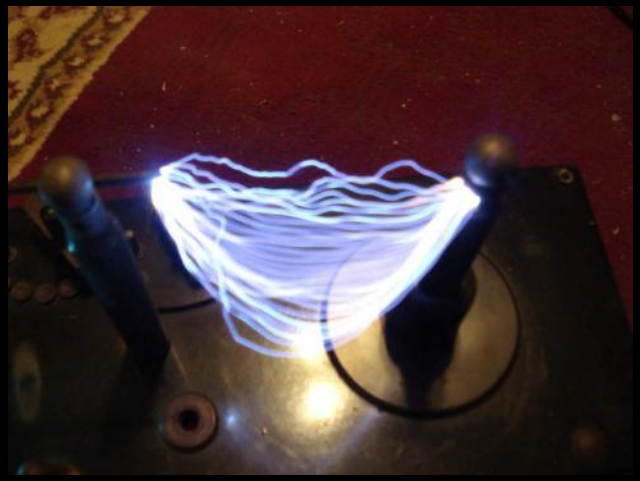
1905: James Seeley “Vulcan Coil”; Empire Electric “Rose”

Scheidel Western, McIntosh Electric

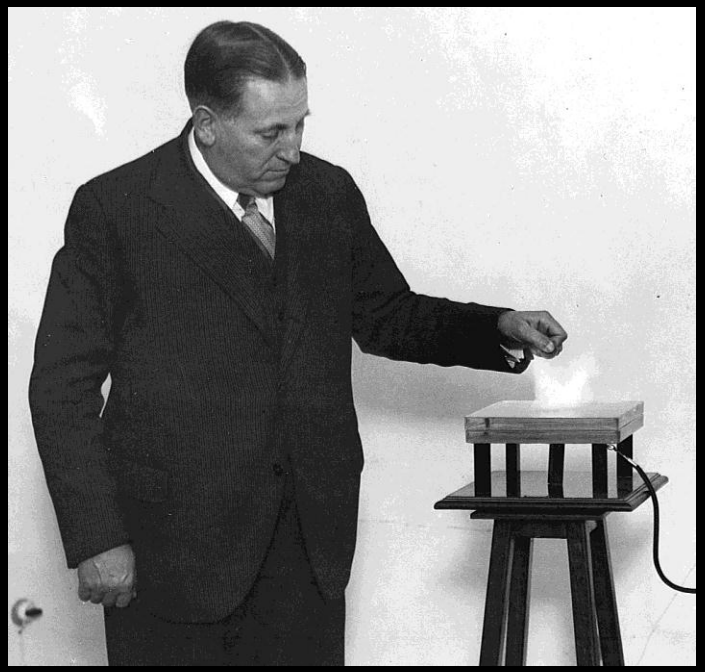


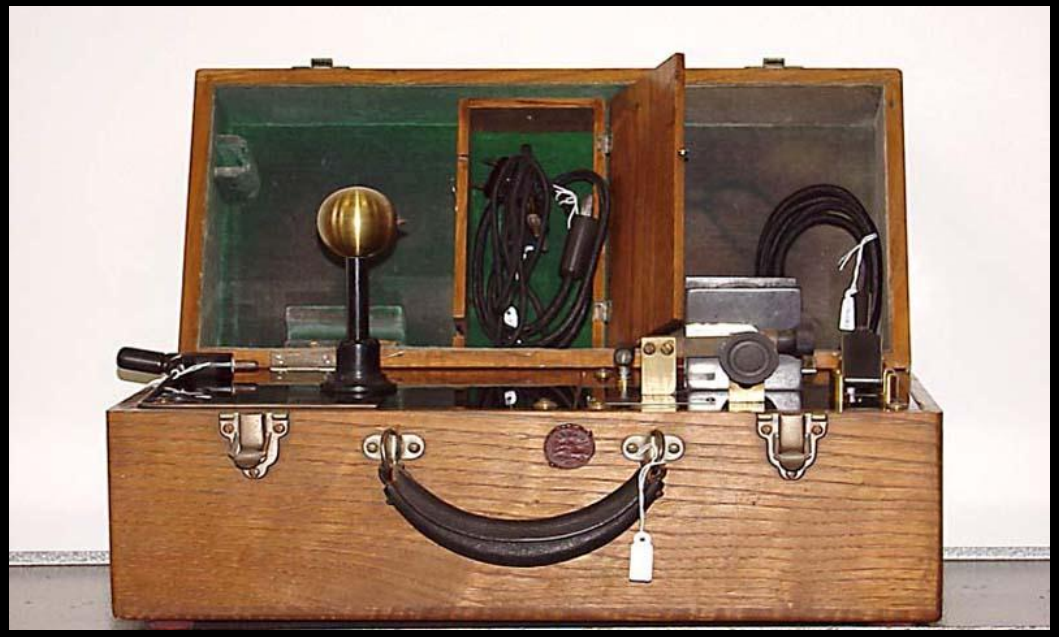


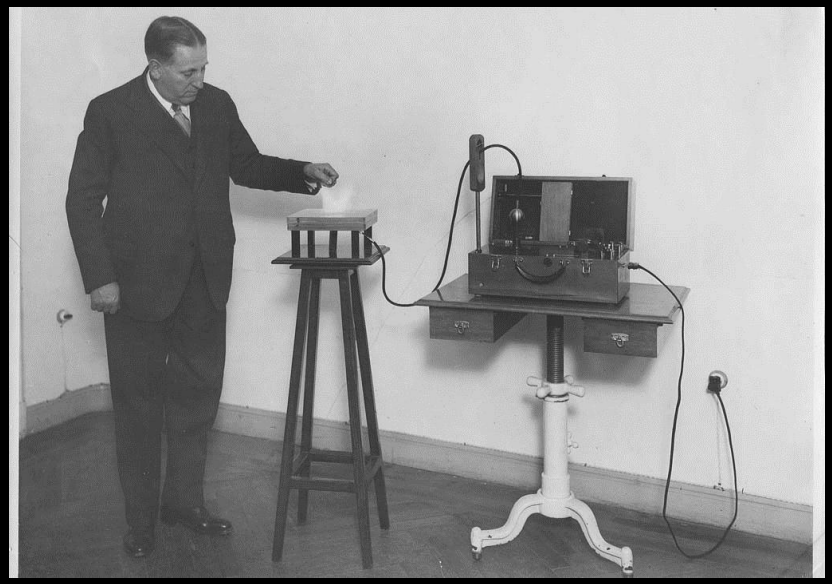
Victor X-Ray

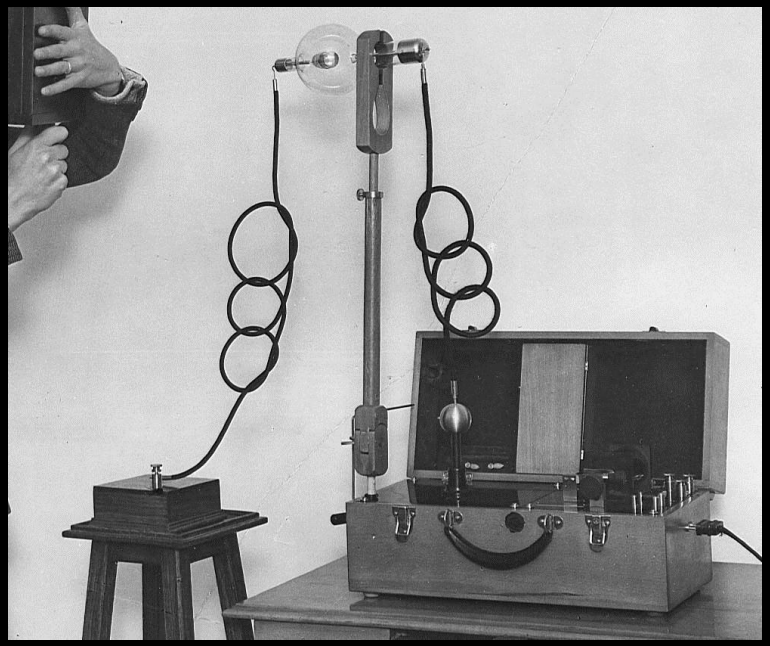


Monico Sanchez

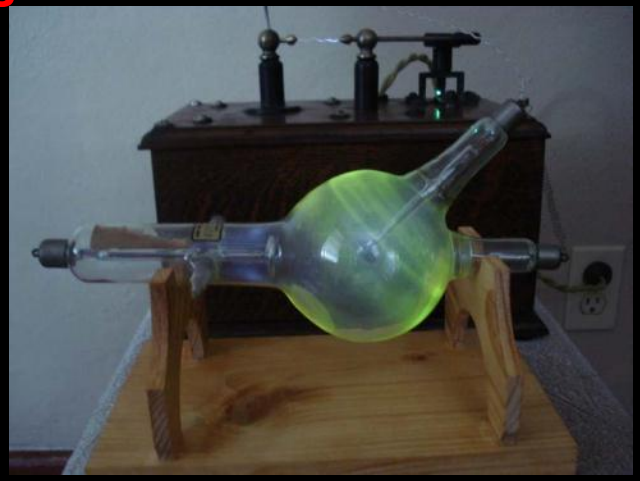


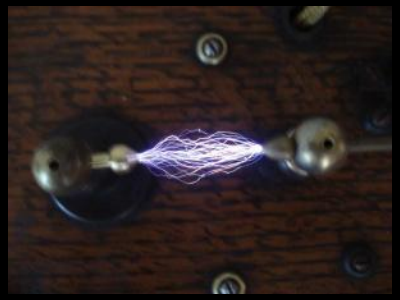




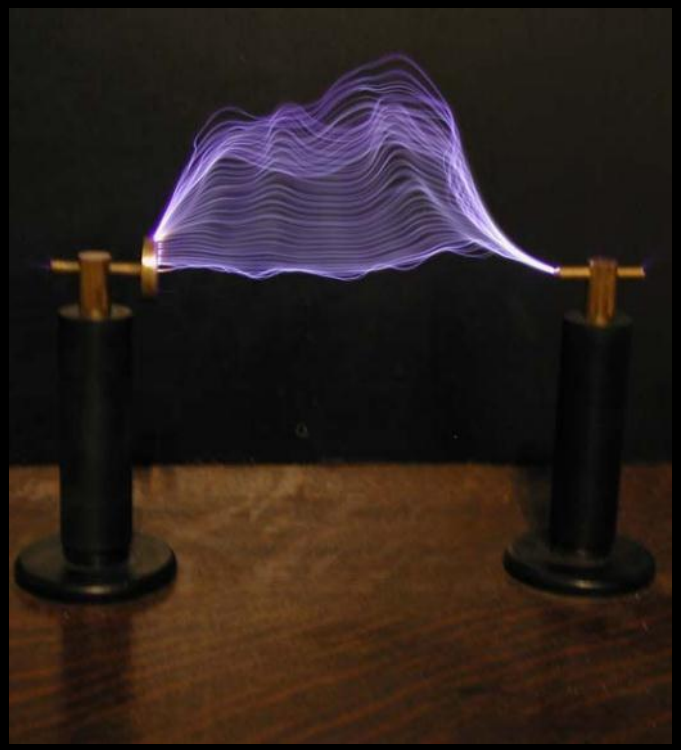


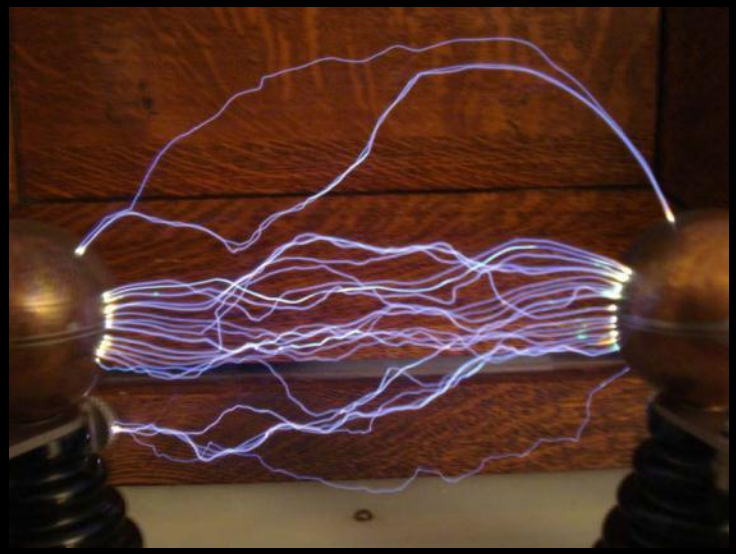
Edwin Lee Edwards





H. G. Fischer, Thompson Plaster, Frank S. Betz, A. S. Aloe





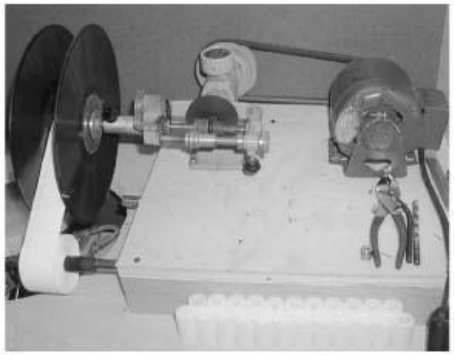
14. Sept 2001: Flaming White Arc Coil

The “Prague Coil”

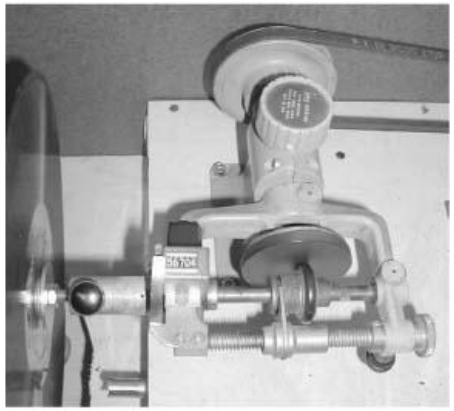
Ribbon-like Flaming Arcs, “Kilowatt Kinraide Coil”

Constructing the "Prague Coil"

Tesla Multilayer Disruptive Discharge Coils...

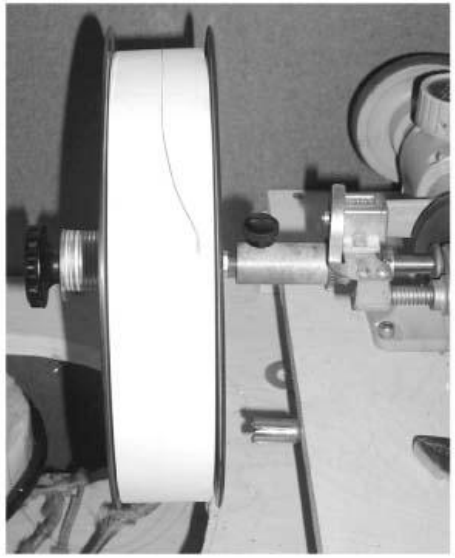


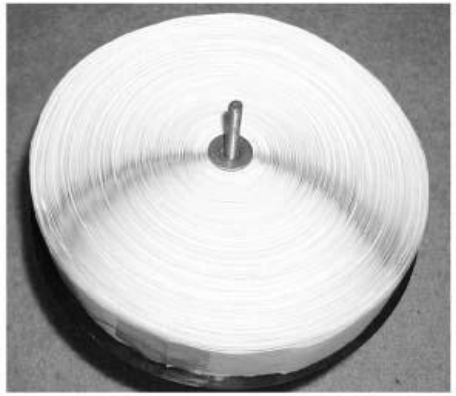
More details of this assembly can be seen below. For convenience, there is also a counter that the operator can use to keep track of the number of turns of wire.



...and Quenched Gap Apparatus 62

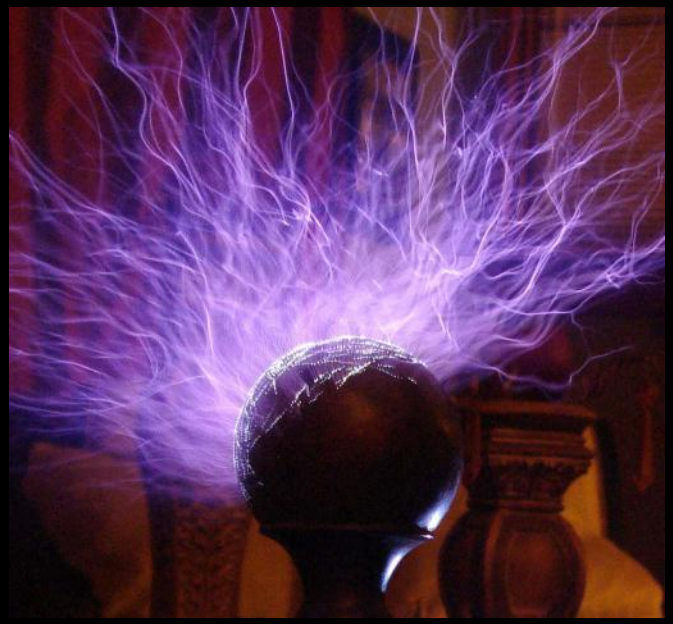
The Turn Of The Century Electrotherapy Museum

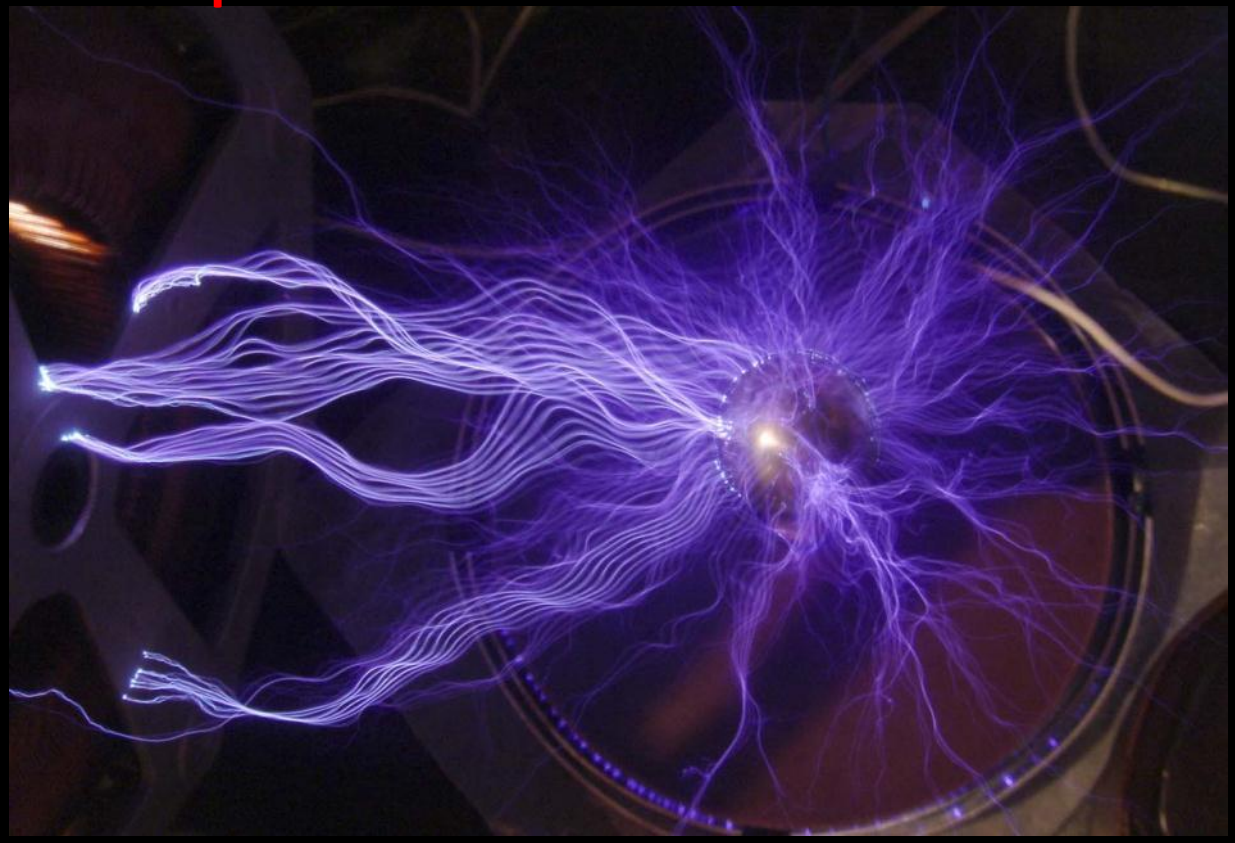




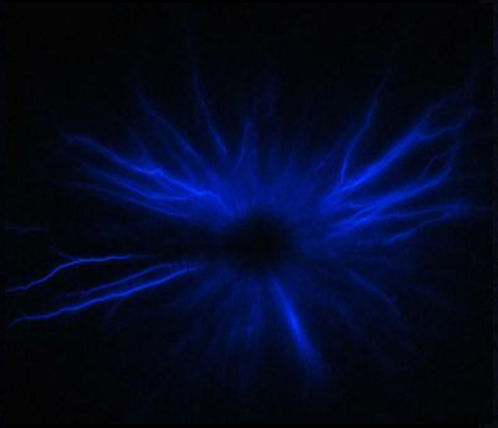
Jeff Behary 65

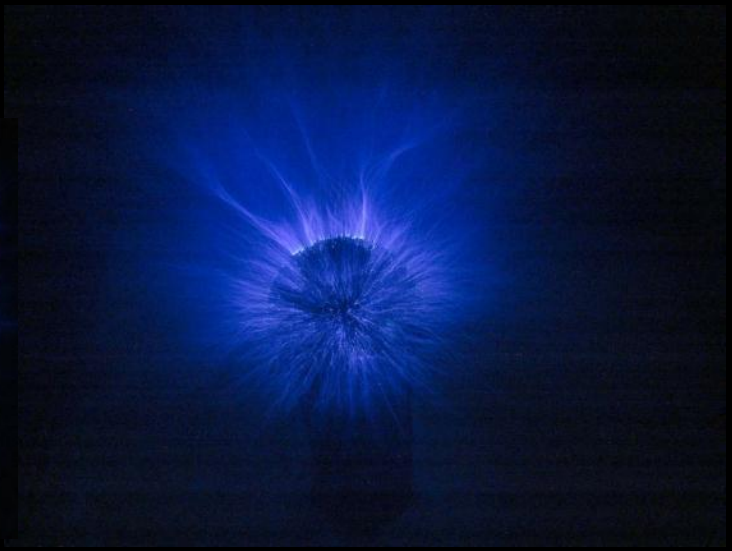
Flat Spiral Coils…





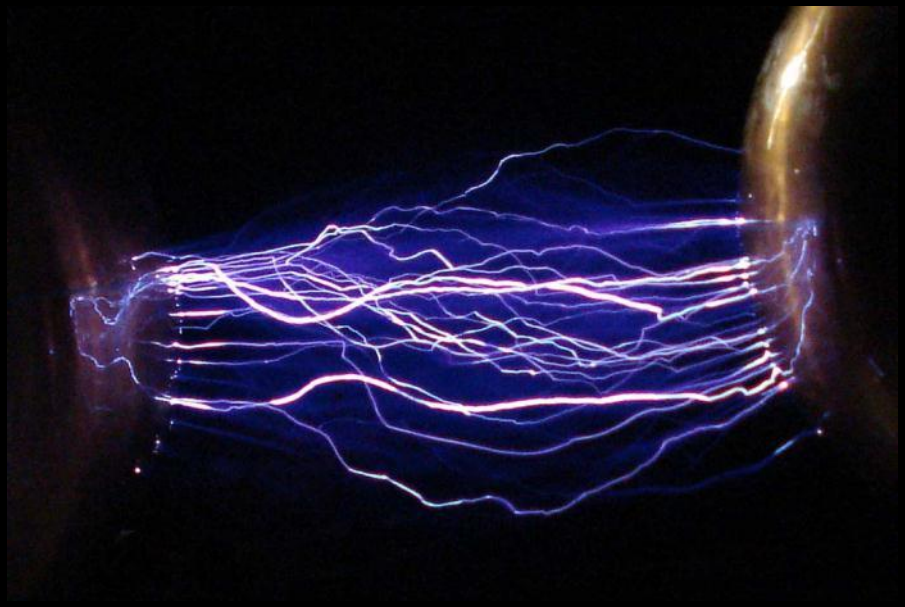
“Phantom Streams” – The “Jackson Coil”

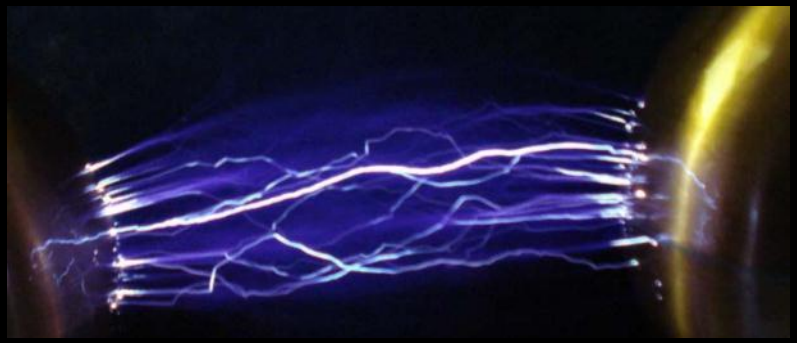


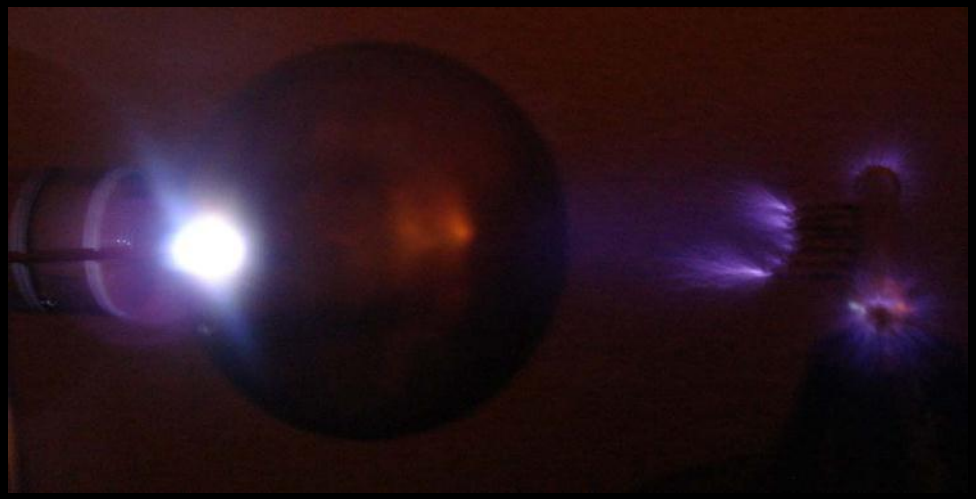


Coil Winding: Flat Spiral Coils

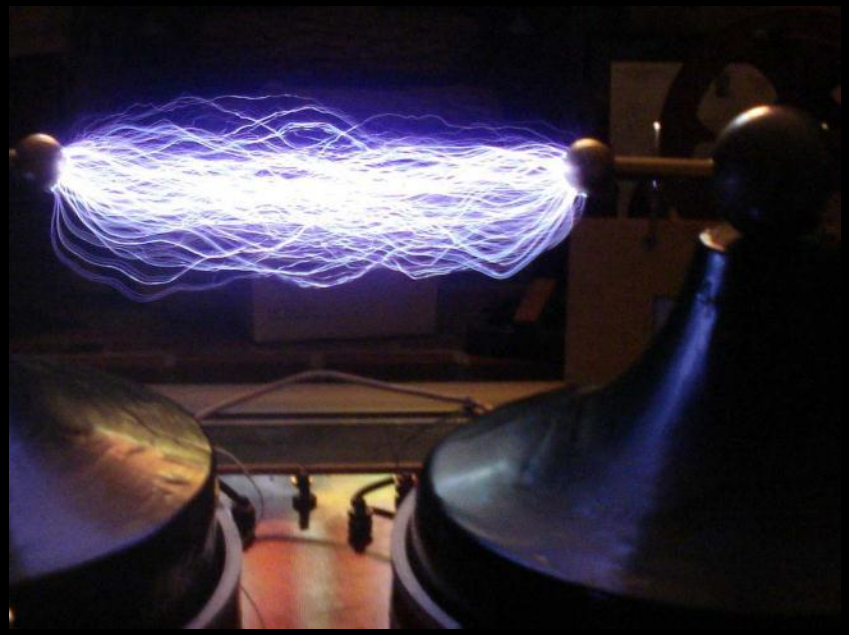
Kindred Kinraide Static Experiments

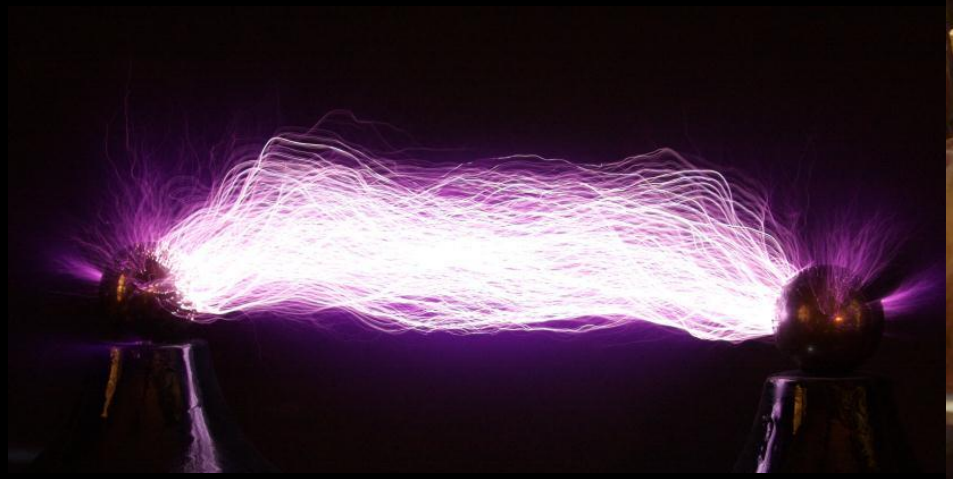




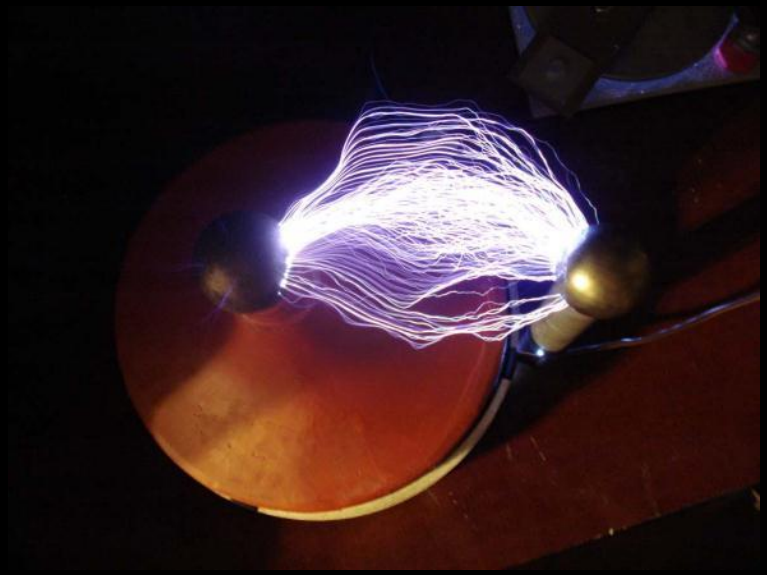


Replica “Kinraide Coil”

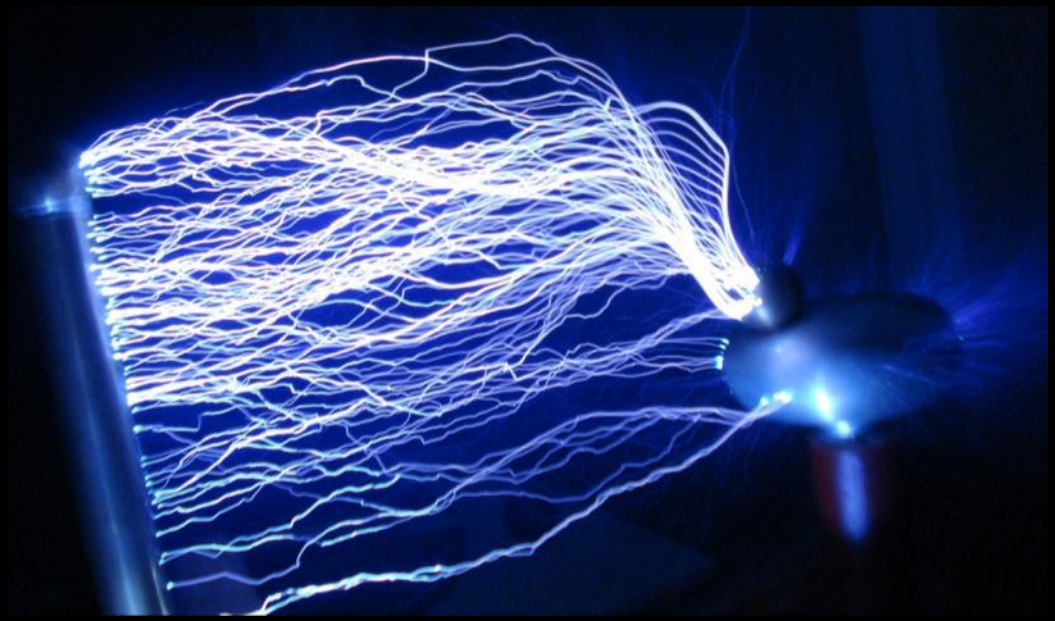


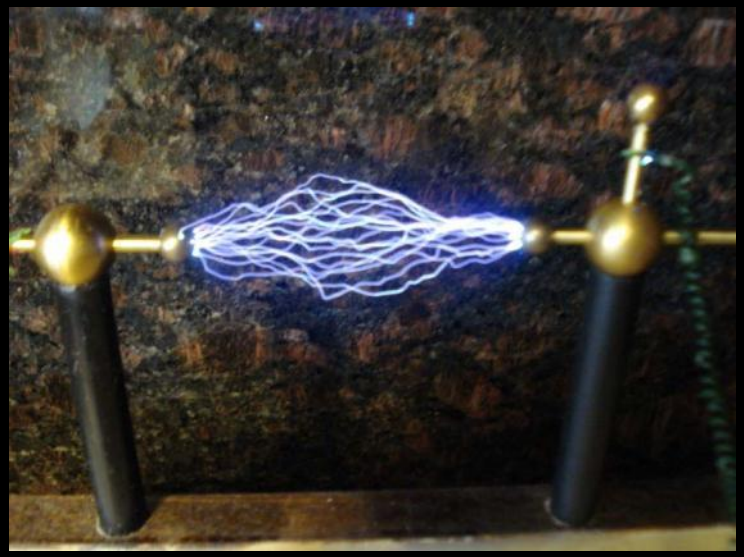


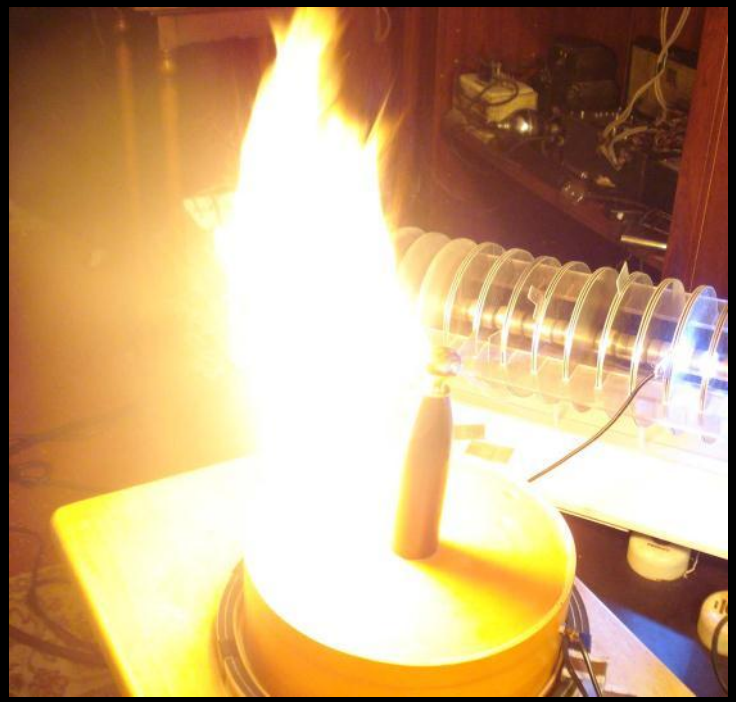
Replicating the “Kinraide Coil”



Low Frequency Pancake Coils…Crackle or Fire?

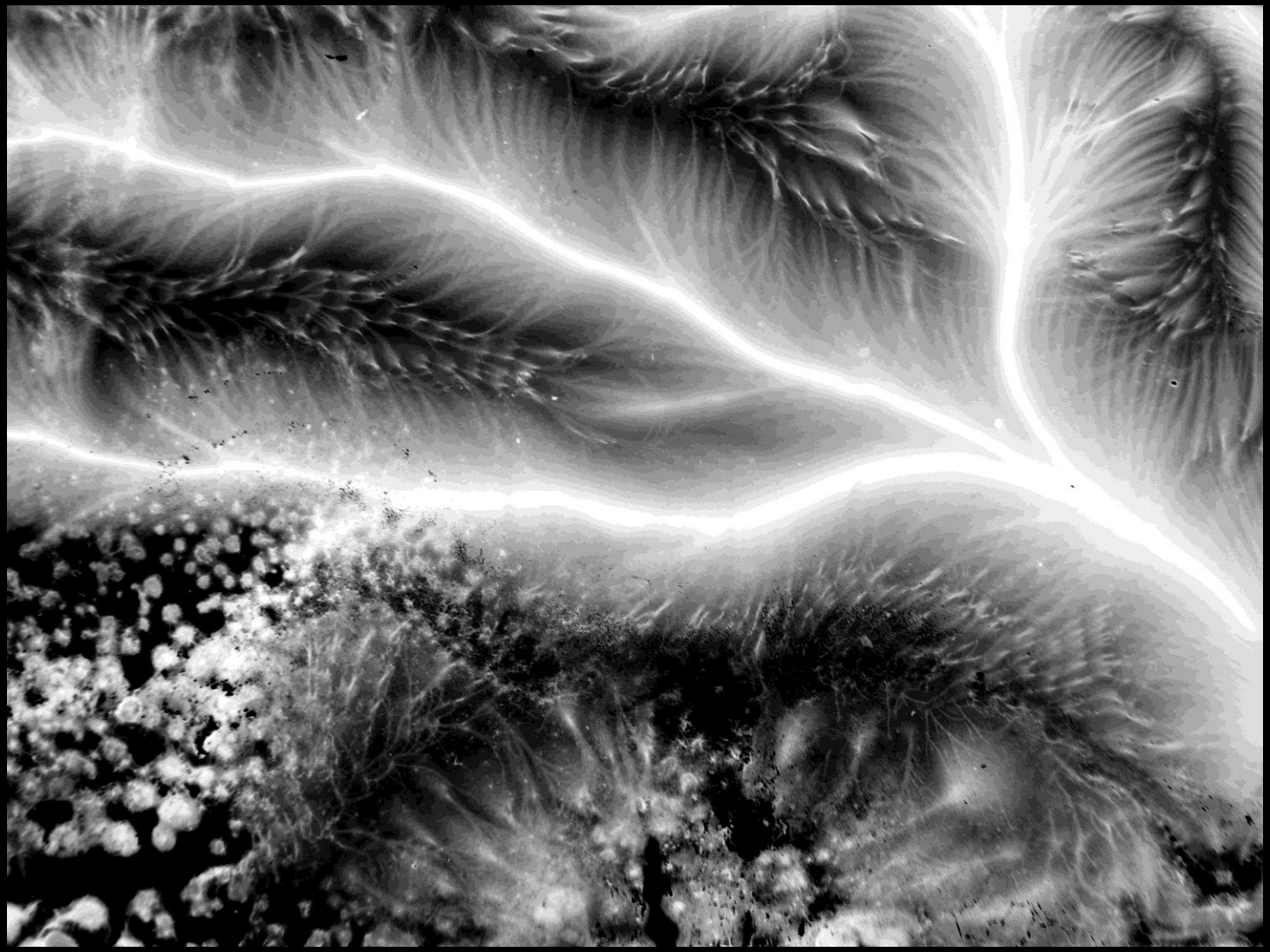




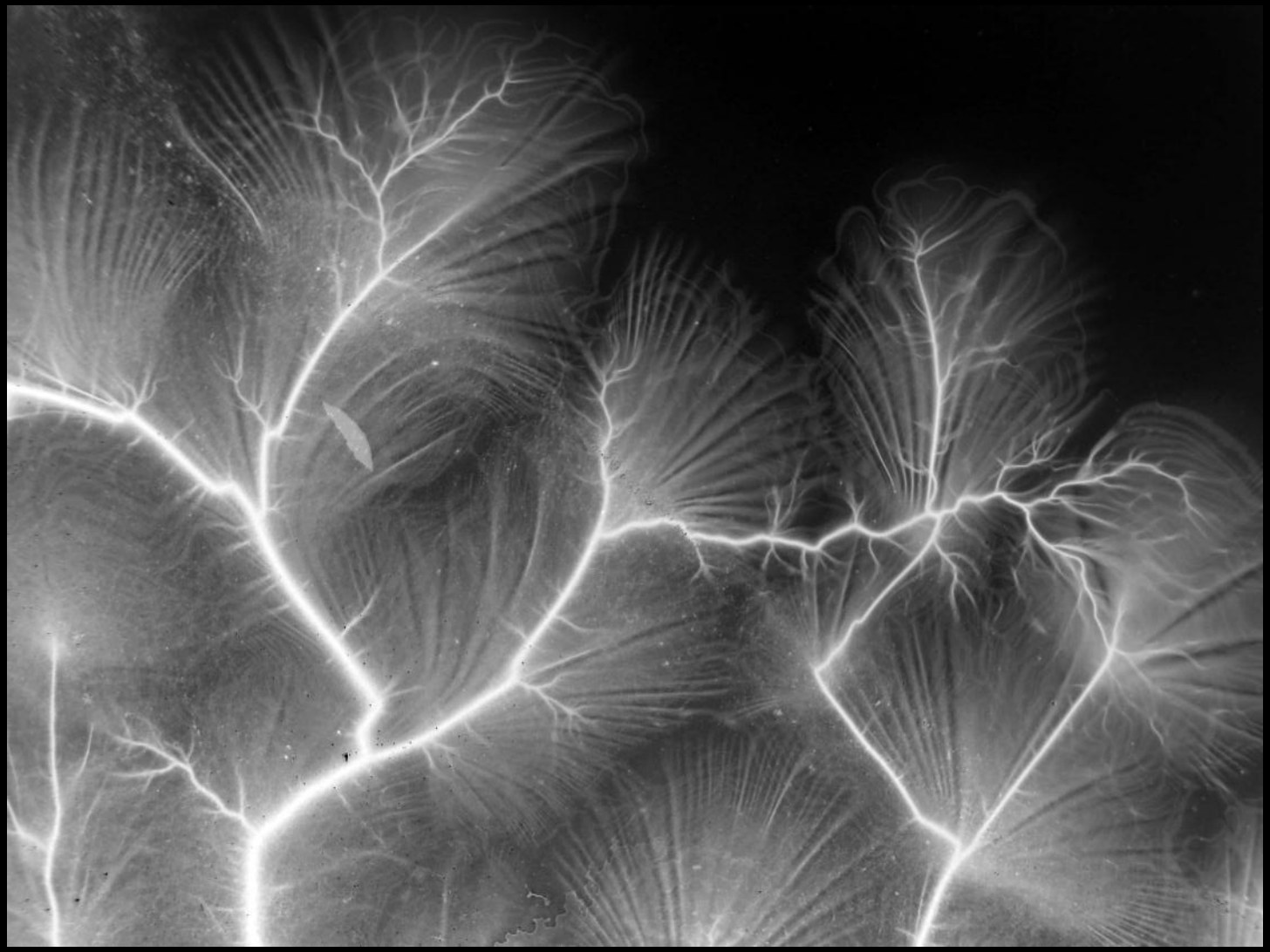


Pancake Magnifier Coil

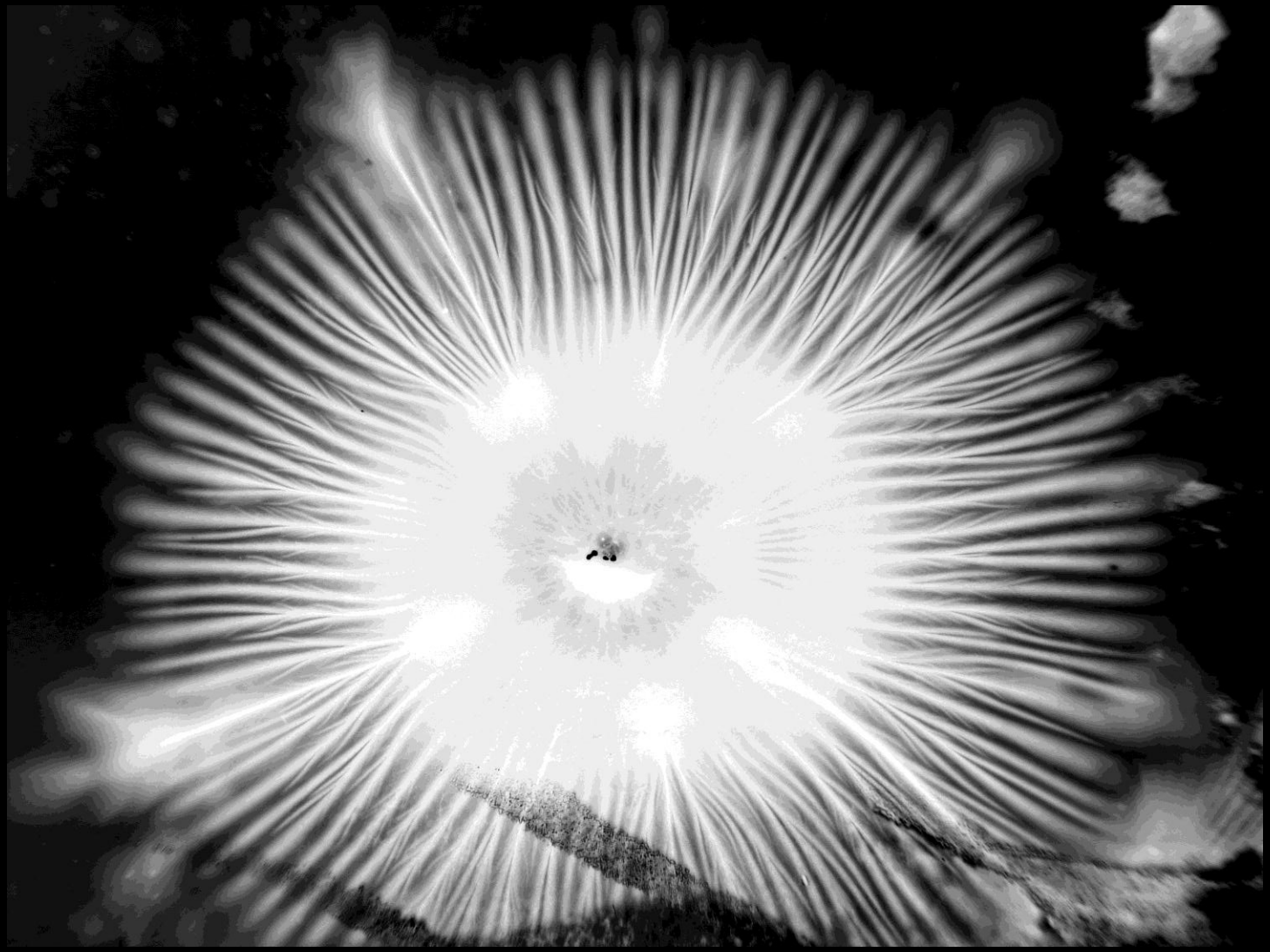
Kinraide After Thoughts: Negative Plumous Discharge



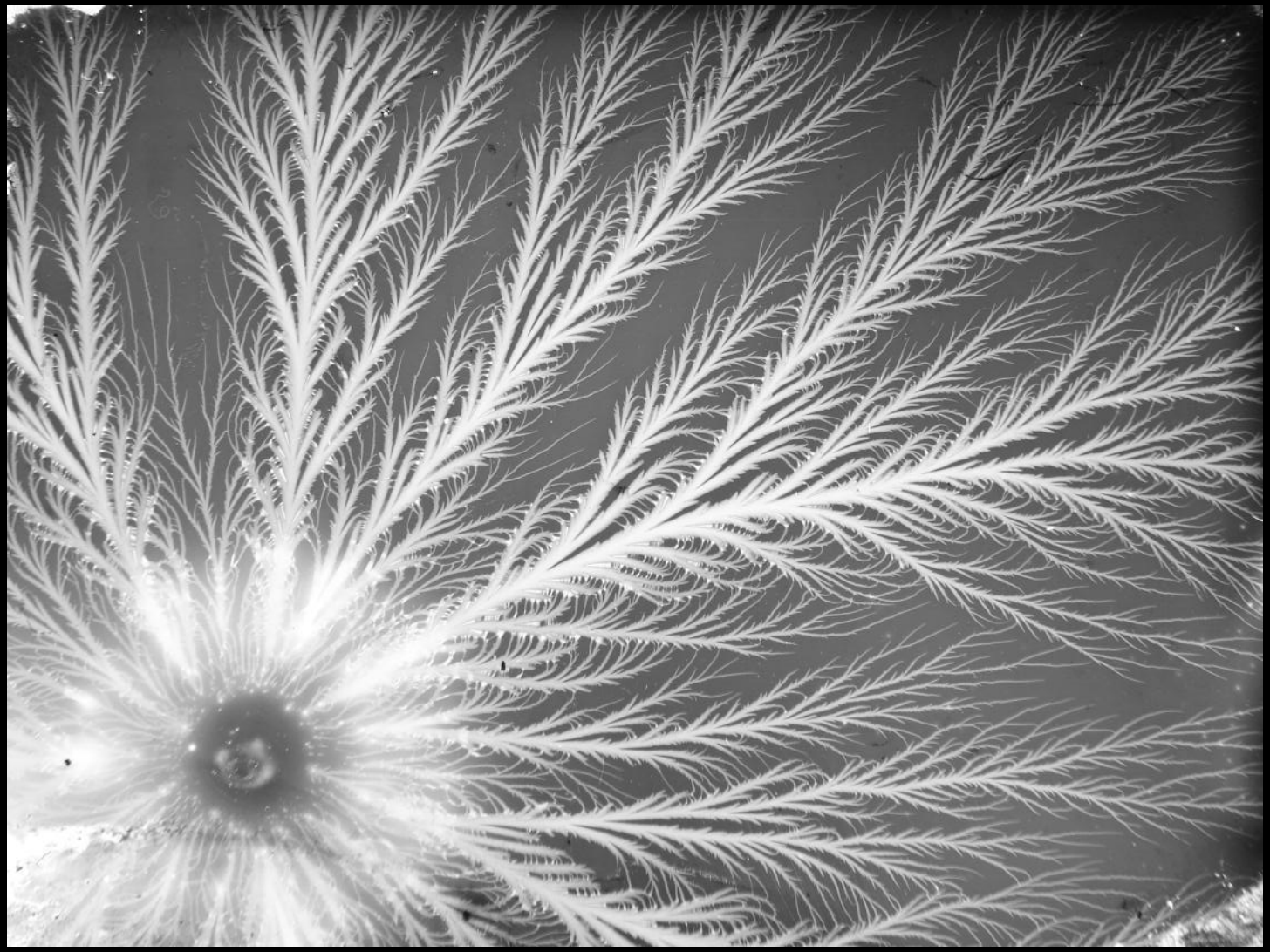
Negative Sparks and Plumes



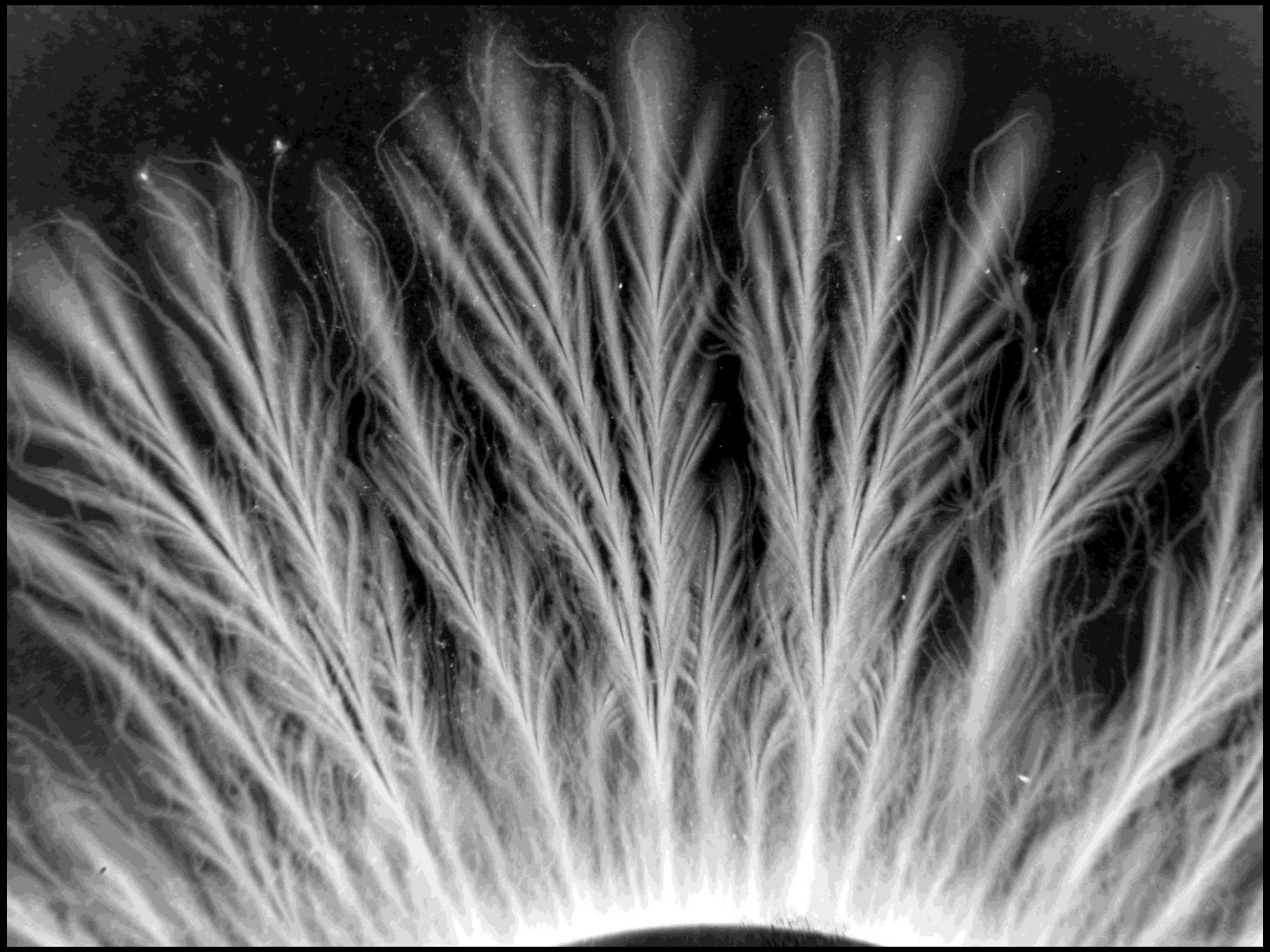
A Study Of The Negative Phase Of Electricity



Positive Filiciform Discharge



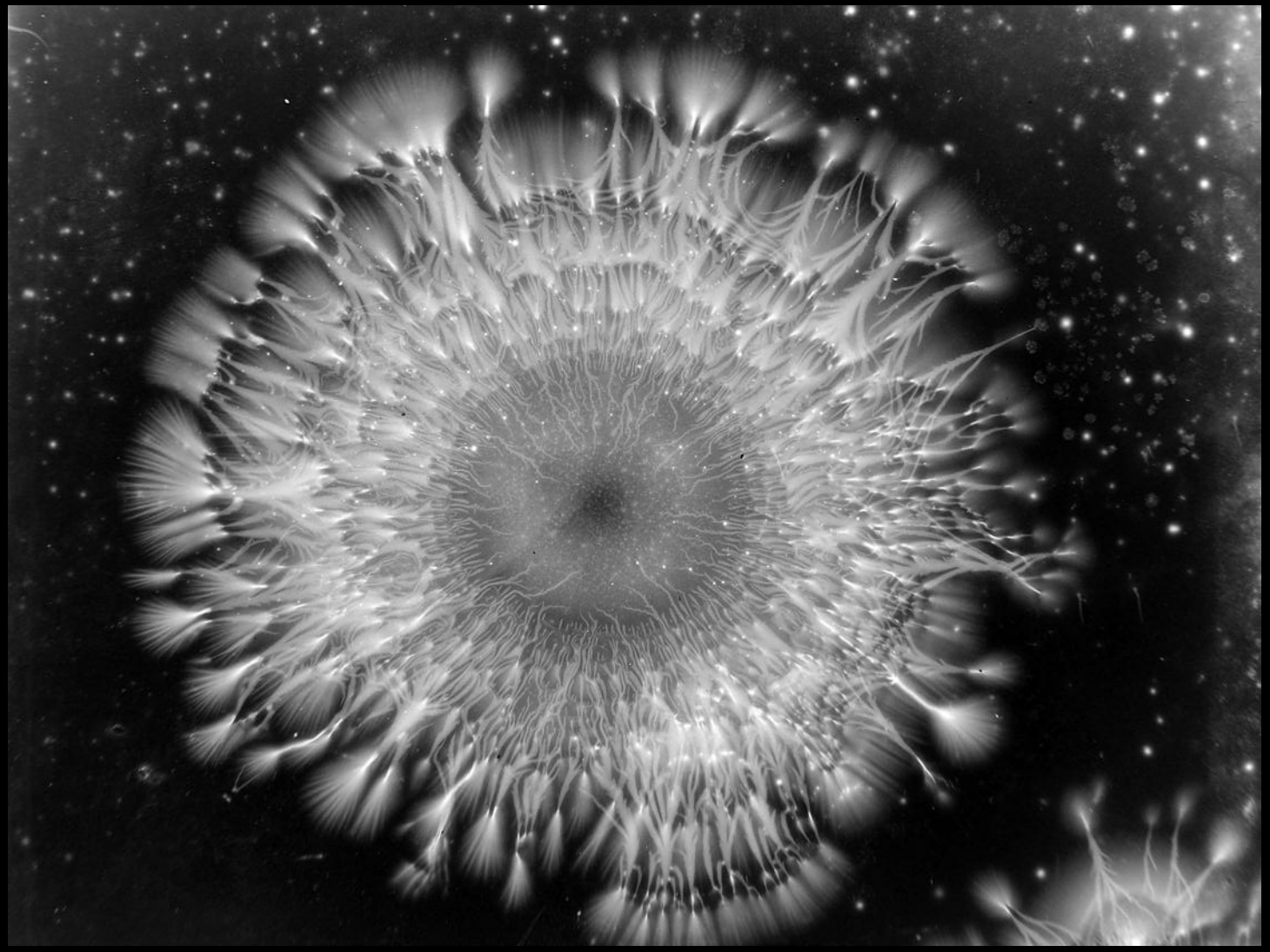
Positive and Negative Autographs Of Electricity



Striated Spiral Discharge

Primary Phases Of Electricity Between Two Condenser Plates

Electrical Entities



The Entity Of Electricity